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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,219	08/05/2003	James J. Rawnick	7162-75	6502

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EXAMINER

NGUYEN, HOANG V

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,219

Applicant(s)

RAWNICK ET AL.

Examiner

Hoang V Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-16 and 18-22 is/are rejected.
- 7) ☒ Claim(s) 11 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/5/03 & 9/10/03</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10, 12-16 and 18-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Rawnick et al (US 2004/0178966 A1).

The applied reference has common inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Rawnick ‘966 (Figures 1-4) discloses a selectable reflector antenna system comprising a main reflector unit 401; a sub-reflector unit 411 disposed apart from the main reflector unit and having at least one cavity 416; at least one fluidic dielectric having a permittivity and permeability; at least one composition processor 101 adapted for dynamically changing a composition of the fluidic dielectric to vary at least one of the permittivity and the permeability in the at least one cavity; and a controller 136 for controlling the composition

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processor to selectively vary at least one of the permittivity and the permeability in the at least one cavity in response to a control signal.

Regarding claims 2 and 3, as applied to claim 1, Rawnick '966 (Figure 4) teaches that the at least one cavity 416 comprises a plurality of concentric tubes consisting of quartz capillary tubes (para. 57).

Regarding claim 4, as applied to claim 1, Rawnick '966 (Figures 2 & 4, and para. 57) teaches that the main reflector unit 401 comprises a reflector portion surrounded on its periphery by at least one cavity 406 capable of being changed with the composition of fluidic dielectric by the at least one composition processor.

Regarding claim 5, as applied to claim 1, Rawnick '966 (Figure 4) teaches that the main reflector unit 401 is a solid dielectric substrate.

Regarding claim 6, as applied to claim 2, Rawnick '966 teaches that each of the at least one composition processor is independently operable for adding and removing the fluidic dielectric from each of the plurality of cavities (para. 40).

Regarding claims 7-9, as applied to claim 1, Rawnick '966 teaches that the fluidic dielectric is comprised of an industrial solvent that has a suspension of magnetic particles contained therein, wherein the magnetic particles are formed of a material selected from the group consisting of ferrite, metallic salts, and organo-metallic particles (para. 40).

Regarding claim 10, as applied to claim 1, Rawnick '966 (Figure 4) teaches that the antenna system further comprises at least one feed horn 407 spaced between the main reflector unit and the sub-reflector unit for generating a radiated signal that is selectively reflected from the sub-reflector unit towards the main reflector unit using the fluidic dielectric.

Regarding claim 12, Rawnick '966 (Figures 1-4) discloses a selectable reflector antenna system comprising a main reflector unit 401; a sub-reflector unit 411 disposed apart from the main reflector unit and having at least one cavity 416; at least one fluidic dielectric having a permittivity and permeability; and at least one fluidic pump unit 304 for moving the at least one fluidic dielectric among at least one cavity and a reservoir for adding and removing the fluid dielectric to the at least one cavity in response to a control signal.

Regarding claims 13 and 14, as applied to claim 12, Rawnick '966 (Figure 4) teaches that the at least one cavity 416 comprises a plurality of concentric tubes consisting of quartz capillary tubes (para. 57).

Regarding claim 15, as applied to claim 12, Rawnick '966 (Figures 2 & 4, and para. 57) teaches that the main reflector unit 401 comprises a reflector portion surrounded on its periphery by at least one cavity 406 capable of being changed with the composition of fluidic dielectric by the at least one pump unit.

Regarding claims 16, as applied to claim 12, Rawnick '966 teaches that the fluidic dielectric is comprised of an industrial solvent that has a suspension of magnetic particles contained therein, wherein the magnetic particles are formed of a material selected from the group consisting of ferrite, metallic salts, and organo-metallic particles (para. 40).

Regarding claims 18-22, the reflector antenna system of Rawnick '966 would enable the method for selectively activating a sub-reflector comprising the steps as claimed.

Allowable Subject Matter

3. Claims 11 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter:

Rawnick '966 fails to further teach, among other features, at least one feed horn spaced above the sub-reflector unit for generating a radiated signal that is selectively transmitted through the sub-reflector unit towards the main reflector unit.

Correspondence

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang V Nguyen whose telephone number is (571) 272-1825. The examiner can normally be reached on Mondays-Fridays from 9:00 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'HVN', with a long horizontal flourish extending to the right.

**HOANG V. NGUYEN
PRIMARY EXAMINER**